R317. Environmental Quality, Water Quality.
R317-1. Definitions and General Requirements.
R317-1-1. Definitions.

1.1 "Absorption system" means a device constructed under the ground surface to receive and to distribute effluent in such a manner that the effluent is effectively filtered and retained below ground surface.

1.2 "Board" means the Utah Water Quality Board.

1.3 "BOD" means 5-day, 20 degrees C. biochemical oxygen demand.

1.4 "Body Politic" means the State or its agencies or any political subdivision of the State to include a county, city, town, improvement district, taxing district or any other governmental subdivision or public corporation of the State.

1.5 "Building sewer" means the pipe which carries wastewater from the building drain to a public sewer, a wastewater disposal system or other point of disposal. It is synonymous with "house sewer".

1.6 "CBOD" means 5-day, 20 degrees C., carbonaceous biochemical oxygen demand.

1.7 "Deep well" means a drinking water supply source which complies with all the applicable provisions of the State of Utah Public Drinking Water Regulations.

1.8 "Digested sludge" means sludge in which the volatile solids content has been reduced to about 50% by a suitable biological treatment process.

1.9 "Division" means the Utah State Division of Water Quality.

1.10 "Domestic wastewater" means a combination of the liquid or water-carried wastes from residences, business buildings, institutions, and other establishments with installed plumbing facilities, together with those from industrial establishments, and with such ground water, surface water, and storm water as may be present. It is synonymous with the term "sewage".

1.11 "Effluent" means the liquid discharge from any unit of a wastewater treatment works, including a septic tank.

1.12 "Human pathogens" means specific causative agents of disease in humans such as bacteria or viruses.

1.13 "Onsite [~~Individual~~] wastewater [~~disposal~~] system" means[~~, for the purposes of Section 19-5-102(7), a~~] an [~~system for~~] underground wastewater disposal system for [~~of~~] domestic wastewater which is designed for a capacity of 5,000 gallons per day or less and is not designed to serve multiple dwelling units which are owned by separate owners except condominiums and twin homes. It usually consists of a building sewer, a septic tank and an absorption system.

1.14 "Industrial wastes" means the liquid wastes from industrial processes as distinct from wastes derived principally from dwellings, business buildings, institutions and the like. It is synonymous with the term "industrial wastewater".

1.15 "Influent" means the total wastewater flow entering a wastewater treatment works.

1.16 "Large underground wastewater disposal system" means the same type of device as described under 1.1.13 above, except that it is designed to handle more than 5,000 gallons per day of domestic wastewater which originates in multiple dwellings, commercial establishments, recreational facilities, schools, or any other wastewater disposal system not covered in 1.1.13 above. The Board controls the installation of such systems.

1.17 "Person" means any individual, corporation, partnership, association, company, or body politic, including any agency or instrumentality of the United States government (Section 19-1-103).

1.18 "Point source" means any discernible, confined and discrete conveyance including but

not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, concentrated animal feeding operation, or vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flow from irrigated agriculture.

1.19 "Polished Secondary Treatment" means a treatment process that can produce an effluent meeting or exceeding the following standards:

A. The arithmetic mean of BOD values determined on effluent samples collected during any 30-day period shall not exceed 15 mg/l, nor shall the arithmetic mean exceed 20 mg/l during any 7-day period.

B. The arithmetic mean of SS values determined on effluent samples collected during any 30-day period shall not exceed 10 mg/l, nor shall the arithmetic mean exceed 12 mg/l during any 7-day period.

C. The geometric mean of total coliform and fecal coliform bacteria in effluent samples collected during any 30-day period shall not exceed either 200 per 100 ml or 20 per 100 ml respectively, nor shall the geometric mean exceed 250 per 100 ml or 25 per 100 ml respectively during any 7-day period.

D. The effluent pH values shall be maintained within the limits of 6.5 to 9.0.

1.20 "Pollution" means such contamination, or other alteration of the physical, chemical, or biological properties of any waters of the state, or such discharge of any liquid, gaseous or solid substance into any waters of the state as will create a nuisance or render such waters harmful or detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life.

1.21 "Seepage trench" means a modified seepage pit, an absorption system consisting of trenches filled with coarse filter material into which septic tank effluent is discharged.

1.22 "Seepage pit" means an absorption system consisting of a covered pit into which effluent is discharged.

1.23 "Septic tank" means a water-tight receptacle which receives the discharge of a drainage system or part thereof, designed and constructed so as to retain solids, digest organic matter through a period of detention and allow the liquids to discharge into the soil outside of the tank through an underground absorption system meeting the requirements of these regulations.

1.24 "Shallow well" means a well providing a source of drinking water which does not meet the requirements of a "deep well".

1.25 "Sludge" means the accumulation of solids which have settled from wastewater. As initially accumulated, and prior to treatment, it is known as "raw sludge".

1.26 "SS" means suspended solids.

~~[1.27 "Subsurface absorption bed" means an absorption system consisting of a covered, gravel-filled bed into which effluent is discharged through specifically designed underground pipes.~~

~~1.28 "Subsurface absorption field" means an absorption system consisting of a series of covered, gravel-filled trenches into which effluent is discharged through specifically designed underground pipes.]~~

1.2[~~9~~]7 "Treatment works" means any plant, disposal field, lagoon, dam, pumping station, incinerator, or other works used for the purpose of treating, stabilizing or holding wastes. (Section 19-5-102).

1.[~~30~~]28 "Wastes" means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked

or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water. (Section 19-5-102).

1.[~~31~~]29 "Wastewater" means sewage, industrial waste or other liquid substances which might cause pollution of waters of the state. Intercepted ground water which is uncontaminated by wastes is not included.

1.[~~32~~]30 "Waters of the state" means all streams, lakes, ponds, marshes, water-courses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion thereof, except that bodies of water confined to and retained within the limits of private property, and which do not develop into or constitute a nuisance, or a public health hazard, or a menace to fish and wildlife, shall not be considered to be "waters of the state" under this definition (Section 19-5-102).

1.31 "Underground Wastewater Disposal System" means a system for underground disposal of domestic wastewater. It usually consists of a building sewer, a septic tank, and an absorption system. It includes onsite wastewater systems and large underground wastewater disposal systems.

R317-1-2. General Requirements.

2.1 Water Pollution Prohibited. No person shall discharge wastewater or deposit wastes or other substances in violation of the requirements of these regulations.

2.2 Construction Permit. No person shall make or construct any device for treatment or discharge of wastewater (including storm sewers), except to an existing sewer system, without first receiving a permit to do so from the Board or its authorized representative, except as provided in R317-1-2.5. Issuance of such permit shall be construed as approval of plans for the purposes of authorizing release of federal or state funds allocated for planning or construction purposes. Construction permits shall expire one year after date of issuance unless substantial and continuous construction is under way. Upon application, construction permits may be extended on an individual basis provided application for such extension is made prior to the permit expiration date.

2.3 Submission of Plans. Any person desiring a permit as required by R317-1-2.2, shall submit complete plans, specifications, and other pertinent documents covering the proposed construction to the Division for review.

2.4 Review of Plans. The Division shall review said plans and specifications as to their adequacy of design for the intended purpose and shall require such changes as are found necessary to assure compliance with pertinent parts of these regulations.

2.5 Exceptions.

A. [~~Individual~~] Onsite Wastewater Disposal Systems. Construction plans and specifications for [~~individual~~] onsite wastewater disposal systems shall be submitted to the local health authority having jurisdiction and need not be submitted to the Division. Such devices, in any case, shall be constructed in accordance with regulations for [~~individual~~] onsite wastewater disposal systems adopted by the Water Quality Board. Compliance with the regulations shall be determined by an on-site inspection by the appropriate health authority.

B. Small Animal Waste (Manure) Lagoons. Construction plans and specifications for small animal waste lagoons as defined in R317-6 (permitted by rule for ground water permits) need not be submitted to the Division if the design is prepared or certified by the U.S.D.A. Natural Resources Conservation Service (NRCS) in accordance with criteria provided for in the Memorandum of

Agreement between the Division and the NRCS, and the construction is inspected by the NRCS. Compliance with these rules shall be determined by on-site inspection by the NRCS.

2.6 Compliance with Water Quality Standards. No person shall discharge wastes into waters of the state except in compliance with these regulations and under circumstances which assure compliance with water quality standards in R317-2.

2.7 Operation of Wastewater Treatment Works. Wastewater treatment works shall be so operated at all times as to produce effluents meeting all requirements of these regulations and otherwise in a manner consistent with adequate protection of public health and welfare. Complete daily records shall be kept of the operation of wastewater treatment works covered under R317-3 on forms approved by the Division and a copy of such records shall be forwarded to the Division at monthly intervals.

R317-1-3. Requirements for Waste Discharges.

3.1 Deadline For Compliance With Water Quality Standards.

All persons discharging wastes into any of the waters of the State on the effective date of these regulations shall provide the degree of wastewater treatment determined necessary to insure compliance with the requirements of R317-2 (Water Quality Standards) as soon as practicable but not later than June 30, 1983, except that the Board may, on a case-by-case basis, allow an extension to the deadline for compliance with these requirements for specific criteria listed in R317-2 where it is determined that the designated use is not being impaired or significant use improvement would not occur or where there is a reasonable question as to the validity of a specific criterion or for other valid reasons as determined by the Board.

3.2 Deadline For Compliance With Secondary Treatment Requirements.

All persons discharging wastes from point sources into any of the waters of the State shall provide treatment processes which will produce secondary effluent meeting or exceeding the following effluent quality standards.

A. The arithmetic mean of BOD values determined on effluent samples collected during any 30-day period shall not exceed 25 mg/l, nor shall the arithmetic mean exceed 35 mg/l during any 7-day period. In addition, if the treatment plant influent is of domestic or municipal sewage origin, the BOD values of effluent samples shall not be greater than 15% of the BOD values of influent samples collected in the same time period. As an alternative, if agreed to by the person discharging wastes, the following effluent quality standard may be established as a requirement of the discharge permit and must be met: The arithmetic mean of CBOD values determined on effluent samples collected during any 30-day period shall not exceed 20 mg/l nor shall the arithmetic mean exceed 30 mg/l during any 7-day period. In addition, if the treatment plant influent is of domestic or municipal sewage origin, the CBOD values of effluent samples shall not be greater than 15% of the CBOD values of influent samples collected in the same time period.

B. The arithmetic mean of SS values determined on effluent samples collected during any 30-day period shall not exceed 25 mg/l, nor shall the arithmetic mean exceed 35 mg/l during any 7-day period. In addition, if the treatment plant influent is of domestic or municipal sewage origin, the SS values of effluent samples shall not be greater than 15% of the SS values of influent samples collected in the same time period.

C. The geometric mean of total coliform and fecal coliform bacteria in effluent samples collected during any 30-day period shall not exceed either 2000 per 100 ml or 200 per 100 ml respectively, nor shall the geometric mean exceed 2500 per 100 ml or 250 per 100 ml respectively,

during any 7-day period. Exceptions to this requirement may be allowed by the Board on a case-by-case basis where domestic wastewater is not a part of the effluent and where water quality standards are not violated.

D. The effluent values for pH shall be maintained within the limits of 6.5 and 9.0.

E. Exceptions to the 85% removal requirements may be allowed on a case-by-case basis where infiltration makes such removal requirements infeasible and where water quality standards are not violated.

F. The Board may allow exceptions to the requirements of (A), (B) and (D) above on a case-by-case basis where the discharge will be of short duration and where there will be of no significant detrimental affect on receiving water quality or downstream beneficial uses.

G. The Board may allow on a case-by-case basis that the BOD5 and TSS effluent concentrations for discharging domestic wastewater lagoons shall not exceed 45 mg/l for a monthly average nor 65 mg/l for a weekly average provided the following criteria are met:

1. The lagoon system is operating within the organic and hydraulic design capacity established by R317-3,

2. The lagoon system is being properly operated and maintained,

3. The treatment system is meeting all other permit limits,

4. There are no significant or categorical industrial users (IU) defined by 40 CFR Part 403, unless it is demonstrated to the satisfaction of the Executive Secretary to the Utah Water Quality Board that the IU is not contributing constituents in concentrations or quantities likely to significantly effect the treatment works,

5. A Waste Load Allocation (WLA) indicates that the increased permit limits would not impair beneficial uses of the receiving stream.

3.3 Extensions To Deadlines For Compliance.

The Board may, upon application of a waste discharger, allow extensions on a case-by-case basis to the compliance deadlines in Section 1.3.2 above where it can be shown that despite good faith effort, construction cannot be completed within the time required.

3.4 Pollutants In Diverted Water Returned To Stream.

A user of surface water diverted from waters of the State will not be required to remove any pollutants which such user has not added before returning the diverted flow to the original watercourse, provided there is no increase in concentration of pollutants in the diverted water. Should the pollutant constituent concentration of the intake surface waters to a facility exceed the effluent limitations for such facility under a federal National Pollutant Discharge Elimination System permit or a permit issued pursuant to State authority, then the effluent limitations shall become equal to the constituent concentrations in the intake surface waters of such facility. This section does not apply to irrigation return flow.

R317-1-4. Utilization and Isolation of Domestic Wastewater Treatment Works Effluent.

4.1 Untreated Domestic Wastewater. Untreated domestic wastewater or effluent not meeting secondary treatment standards as defined by these regulations shall be isolated from all public contact until suitably treated. Land disposal or land treatment of such wastewater or effluent may be accomplished by use of an approved total containment lagoon as defined in R317-3 or by such other treatment approved by the Board as being feasible and equally protective of human health and the environment.

4.2 Submittal of Reuse Project Plan. If a person intends to reuse or provide for the reuse of

treated domestic wastewater directly for any purpose, except on the treatment plant site as described in R317-1-4.6, a Reuse Project Plan must be submitted to the Division of Water Quality. A copy of the plan must also be submitted to the local health department. Any needed construction of wastewater treatment and delivery systems would also be covered by a construction permit as required in section R317-1-2.2 of this rule. The plan must contain the following information. At least items A and B should be provided before construction begins. All items must be provided before any water deliveries are made.

A. A description of the source, quantity, quality, and use of the treated wastewater to be delivered, the location of the reuse site, and how the requirements of this rule would be met.

B. A description of the water rights for the use of the treated effluent. This will include evidence that the State Engineer has been notified and has agreed that the treatment entity has the right to use the water for the intended use.

C. An operation and management plan to include:

1. A copy of the contract with the user, if other than the treatment entity.

2. A labeling and separation plan for the prevention of cross connections between reclaimed water distribution lines and potable water lines. Guidance for distribution systems is available from the Division of Water Quality.

3. Schedules for routine maintenance.

4. A contingency plan for system failure or upsets.

D. If the water will be delivered to another entity for distribution and use, a copy of the contract covering how the requirements of this rule will be met.

4.3 Use of Treated Domestic Wastewater Effluent Where Human Exposure is Likely (Type I)

A. Uses Allowed

1. Residential irrigation, including landscape irrigation at individual houses.

2. Urban uses, which includes non-residential landscape irrigation, golf course irrigation, toilet flushing, fire protection, and other uses with similar potential for human exposure.

3. Irrigation of food crops where the applied reclaimed water is likely to have direct contact with the edible part. Type I water is required for all spray irrigation of food crops.

4. Irrigation of pasture for milking animals.

5. Impoundments of wastewater where direct human contact is likely to occur.

6. All Type II uses listed in 4.4.A below.

B. Required Treatment Processes

1. Secondary treatment process, which may include activated sludge, trickling filters, rotating biological contactors, oxidation ditches, and stabilization ponds. The secondary treatment process should produce effluent in which both the BOD and total suspended solids concentrations do not exceed 25 mg/l as a monthly mean.

2. Filtration, which includes passing the wastewater through filter media such as sand and/or anthracite or approved membrane processes.

3. Disinfection to destroy, inactivate, or remove pathogenic microorganisms by chemical, physical, or biological means. Disinfection may be accomplished by chlorination, ozonation, or other chemical disinfectants, UV radiation, membrane processes, or other approved processes.

C. Water Quality Limits. The quality of effluent before use must meet the following standards. Testing methods and procedures shall be performed according to Standards Methods for Examination of Water and Wastewater, eighteenth edition, 1992, or as otherwise approved by the

Executive Secretary.

1. The monthly arithmetic mean of BOD shall not exceed 10 mg/l as determined by daily composite sampling. Composite samples shall be comprised of at least six flow proportionate samples taken over a 24-hour period.

2. The daily arithmetic mean turbidity shall not exceed 2 NTU, and turbidity shall not exceed 5 NTU at any time. Turbidity shall be measured continuously. The turbidity standard shall be met prior to disinfection. If the turbidity standard cannot be met, but it can be demonstrated to the satisfaction of the Executive Secretary that there exists a consistent correlation between turbidity and the total suspended solids, then an alternate turbidity standard may be established. This will allow continuous turbidity monitoring for quality control while maintaining the intent of the turbidity standard, which is to have 5 mg/l total suspended solids or less to assure adequate disinfection.

3. The weekly median fecal coliform concentration shall be none detected, as determined from daily grab samples, and no sample shall exceed 14 organisms/100 ml.

4. The total residual chlorine shall be measured continuously and shall at no time be less than 1.0 mg/l after 30 minutes contact time at peak flow. If an alternative disinfection process is used, it must be demonstrated to the satisfaction of the Executive Secretary that the alternative process is comparable to that achieved by chlorination with a 1 mg/l residual after 30 minutes contact time. If the effectiveness cannot be related to chlorination, then the effectiveness of the alternative disinfection process must be demonstrated by testing for pathogen destruction as determined by the Executive Secretary. A 1 mg/l total chlorine residual is required after disinfection and before the reclaimed water goes into the distribution system.

5. The pH as determined by daily grab samples or continuous monitoring shall be between 6 and 9.

D. Other Requirements

1. An alternative disposal option or diversion to storage must be automatically activated if turbidity exceeds or chlorine residual drops below the instantaneous required value for more than 5 minutes.

2. Any irrigation must be at least 50 feet from any potable water well. Impoundments of reclaimed water, if not sealed, must be at least 500 feet from any potable water well.

3. Requirements for ground water discharge permits, if required, shall be determined in accordance with R317-6.

4. For residential landscape irrigation at individual homes, additional quality control restrictions may be required by the Executive Secretary. Proposals for such uses should also be submitted to the local health authority to determine any conditions they may require.

4.4 Use of Treated Domestic Wastewater Effluent Where Human Exposure is Unlikely (Type II)

A. Uses Allowed

1. Irrigation of sod farms, silviculture, limited access highway rights of way, and other areas where human access is restricted or unlikely to occur.

2. Irrigation of food crops where the applied reclaimed water is not likely to have direct contact with the edible part, whether the food will be processed or not (spray irrigation not allowed).

3. Irrigation of animal feed crops other than pasture used for milking animals.

4. Impoundments of wastewater where direct human contact is not allowed or is unlikely to occur.

5. Cooling water. Use for cooling towers which produce aerosols in populated areas may

have special restrictions imposed.

6. Soil compaction or dust control in construction areas.

B. Required Treatment Processes

1. Secondary treatment process, which may include activated sludge, trickling filters, rotating biological contactors, oxidation ditches, and stabilization ponds. Secondary treatment should produce effluent in which both the BOD and total suspended solids do not exceed 25 mg/l as a monthly mean.

2. Disinfection to destroy, inactivate, or remove pathogenic microorganisms by chemical, physical, or biological means. Disinfection may be accomplished by chlorination, ozonation, or other chemical disinfectants, UV radiation, membrane processes, or other approved processes.

C. Water Quality Limits. The quality of effluent before use must meet the following standards. Testing methods and procedures shall be performed according to Standards Methods for Examination of Water and Wastewater, eighteenth edition, 1992, or as otherwise approved by the Executive Secretary.

1. The monthly arithmetic mean of BOD shall not exceed 25 mg/l as determined by weekly composite sampling. Composite samples shall be comprised of at least six flow proportionate samples taken over a 24-hour period.

2. The monthly arithmetic mean total suspended solids concentration shall not exceed 25 mg/l as determined by daily composite sampling. The weekly mean total suspended solids concentration shall not exceed 35 mg/l.

3. The weekly median fecal coliform concentration shall not exceed 200 organisms/100 ml, as determined from daily grab samples, and no sample shall exceed 800 organisms/100 ml.

4. The pH as determined by daily grab samples or continuous monitoring shall be between 6 and 9.

5. At the discretion of the Executive Secretary, the sampling frequency to determine compliance with water quality limits for effluent from lagoon systems used to irrigate agricultural crops, may be reduced to monthly grab sampling for BOD, and weekly grab sampling for fecal coliform, TSS and pH.

D. Other Requirements

1. An alternative disposal option or diversion to storage must be available in case quality requirements are not met.

2. Any irrigation must be at least 300 feet from any potable water well. Spray irrigation must be at least 300 feet from areas intended for public access. This distance may be reduced or increased by the Executive Secretary, based on the type of spray irrigation equipment used and other factors. Impoundments of reclaimed water, if not sealed, must be at least 500 feet from any potable water well.

3. Requirements for ground water discharge permits, if required, shall be determined in accordance with R317-6.

4. Public access to effluent storage and irrigation or disposal sites shall be restricted by a stock-tight fence or other comparable means which shall be posted and controlled to exclude the public.

4.5 Records. Records of volume and quality of treated wastewater delivered for reuse shall be maintained and submitted monthly in accordance with R317-1-2.7. If monthly operating reports are already being submitted to the Division of Water Quality, the data on water delivered for reuse may be submitted on the same form.

4.6 Use of Secondary Effluent at Plant Site. Secondary effluent may be used at the treatment

plant site in the following manner provided there is no cross-connection with a potable water system:

A. Chlorinator injector water for wastewater chlorination facilities, provided all pipes and outlets carrying the effluent are suitably labeled.

B. Water for hosing down wastewater clarifiers, filters and related units, provided all pipes and outlets carrying the effluent are suitably labeled.

C. Irrigation of landscaped areas around the treatment plant from which the public is excluded.

4.7 Other Uses of Effluents. Proposed uses of effluents not identified above, including industrial uses, shall be considered for approval by the Board based on a case-specific analysis of human health and environmental concerns.

4.8 Reclaimed Water Distribution Systems. Where reclaimed water is to be provided by pressure pipeline, unless contained in surface pipes wholly on private property and for agricultural purposes, the following requirements will apply. The requirements will apply to all new systems constructed after May 4, 1998, and it is recommended that the accessible portions of existing reclaimed water distribution systems be retrofitted to comply with these rules. Requirements for secondary irrigation systems proposed for conversion from use of non-reclaimed water to use with reclaimed water will be considered on an individual basis considering protection of public health and the environment. Any person or agency that is constructing all or part of the distribution system must obtain a construction permit from the Division of Water Quality prior to beginning construction.

A. Distribution Lines

1. Minimum Separation.

a. Horizontal Separation. Reclaimed water main distribution lines parallel to potable (culinary) water lines shall be installed at least ten feet horizontally from the potable water lines. Reclaimed water main distribution lines parallel to sanitary sewer lines shall be installed at least ten feet horizontally from the sanitary sewer line if the sanitary sewer line is located above the reclaimed water main and three feet horizontally from the sanitary sewer line if the sanitary sewer line is located below the reclaimed water main.

b. Vertical Separation. At crossings of reclaimed water main distribution lines with potable water lines and sanitary sewer lines the order of the lines from lowest in elevation to highest should be; sanitary sewer line, reclaimed water line, and potable water line. A minimum 18 inches vertical separation between these utilities shall be provided as measured from outside of pipe to outside of pipe. The crossings shall be arranged so that the reclaimed water line joints will be equidistant and as far as possible from the water line joints and the sewer line joints. If the reclaimed water line must cross above the potable water line, the vertical separation shall be a minimum 18 inches and the reclaimed water line shall be encased in a continuous pipe sleeve to a distance on each side of the crossing equal to the depth of the potable water line from the ground surface. If the reclaimed water line must cross below the sanitary sewer line, the vertical separation shall be a minimum 18 inches and the reclaimed water line shall be encased in a continuous pipe sleeve to a distance on each side of the crossing equal to the depth of the reclaimed water line from the ground surface.

c. Special Provisions. Where the horizontal and/or vertical separation as required above cannot be maintained, special construction requirements shall be provided in accordance with requirements in R317-3 for protection of potable water lines. Existing pressure lines carrying reclaimed water shall not be required to meet these requirements.

2. Depth of Installation. To provide protection of the installed pipeline, reclaimed water lines should be installed with a minimum depth of bury of three feet.

3. Reclaimed Water Pipe Identification.

a. General. All new buried pipe, including service lines, valves, and other appurtenances, shall be colored purple, Pantone 522 or equivalent. If fading or discoloration of the purple pipe is experienced during construction, identification tape is recommended. Locating wire along the pipe is also recommended.

b. Identification Tape. If identification tape is installed along with the purple pipe, it shall be prepared with white or black printing on a purple field, color Pantone 512 or equivalent, having the words, "Caution: Reclaimed Water-- Do Not Drink". The overall width of the tape shall be at least three inches. Identification tape shall be installed 12 inches above the transmission pipe longitudinally and shall be centered.

4. Conversion of existing water lines. Existing water lines that are being converted to use with reclaimed water shall first be accurately located and comply with leak test standards in accordance with AWWA Standard C-600 and in coordination with regulatory agencies. The pipeline must be physically disconnected from any potable water lines and brought into compliance with current State cross connection rules and requirements (R309-102-5), and must meet minimum separation requirements in section 4.8.A.1 of this rule above. If the existing lines meet approval of the water supplier and the Division, the lines shall be approved for reclaimed water distribution. If regulatory compliance of the system (accurate location and verification of no cross connections) cannot be verified with record drawings, televising, or otherwise, the lines shall be uncovered, inspected, and identified prior to use. All accessible portions of the system must be retrofitted to meet the requirements of this rule.

5. Valve Boxes and Other Surface Identification. All valve covers shall be of non-interchangeable shape with potable water covers, and shall have an inscription cast on the top surface stating "Reclaimed Water". Valve boxes shall meet AWWA standards. All above ground facilities shall be consistently color coded (purple, Pantone 512) and marked to differentiate reclaimed water facilities from potable water facilities.

6. Blow-off Assemblies. If either an in-line type or end-of-line type blow-off or drain assembly is installed in the system, the Division of Water Quality shall be consulted on acceptable discharge or runoff locations.

B. Storage. If storage or impoundment of reclaimed water is provided, the following requirements apply:

1. Fencing. For Type I effluent, no fencing is required by this rule, but may be required by local laws or ordinances. For Type II effluent, see R317-1-4.4.D.4 above.

2. Identification. All storage facilities shall be identified by signs prepared according to the requirements of Section 4.8.D.6 below. Signs shall be posted on the surrounding fence at minimum 500 foot intervals and at the entrance of each facility. If there is no fence, signs shall be located as a minimum on each side of the facility or at minimum 250 foot intervals or at all accessible points.

C. Pumping Facilities.

1. Marking. All exposed and above ground piping, fittings, pumps, valves, etc., shall be painted purple, Pantone 512. In addition, all piping shall be identified using an accepted means of labeling reading "Caution: Reclaimed Water - Do Not Drink." In a fenced pump station area, signs shall be posted on the fence on all sides.

2. Sealing Water. Any potable water used as seal water for reclaimed water pumps seals shall be protected from backflow with a reduced pressure principle device.

D. Other Requirements.

1. Backflow Protection. In no case shall a connection be made between the potable and reclaimed water system. If it is necessary to put potable water into the reclaimed distribution system, an approved air gap must be provided to protect the potable water system. A reduced pressure principle device may be used only when approved by the Division of Water Quality, the local health department, and the potable water supplier.

2. Drinking Fountains. Drinking fountains and other public facilities shall be placed out of any spray irrigation area in which reclaimed water is used, or shall be otherwise protected from contact with the reclaimed water. Exterior drinking fountains and other public facilities shall be shown and called out on the construction plans. If no exterior drinking fountains, picnic tables, food establishments, or other public facilities are present in the design area, then it shall be specifically stated on the plans that none are to exist.

3. Hose Bibs. Hose bibs on reclaimed water systems in public areas and at individual residences shall be prohibited. In public, non-residential areas, replacement of hose bibs with quick couplers is recommended.

4. Equipment and Facilities. Any equipment or facilities such as tanks, temporary piping or valves, and portable pumps which have been or may be used with reclaimed water, and could be interchangeably used with potable water or sewage, shall be cleaned and disinfected before or after use as appropriate. This disinfection and cleaning shall ensure the protection of the public health in the event of any subsequent use.

5. Warning Labels. Warning labels shall be installed on designated facilities such as, but not limited to, controller panels and washdown or blow-off hydrants on water trucks, and temporary construction services. The labels shall indicate the system contains reclaimed water that is unsafe to drink.

6. Warning signs. Where reclaimed water is stored or impounded, or used for irrigation in public areas, warning signs shall be installed and contain, as a minimum, ½ inch purple letters (Pantone 512) on a white or other high contrast background notifying the public that the water is unsafe to drink. Signs may also have a purple background with white or other high contrast lettering. Warning signs and labels shall read, "Warning: Reclaimed Water - Do Not Drink". The signs shall include the international symbol for Do Not Drink.

R317-1-5. Use of Industrial Wastewaters.

5.1 Use of industrial wastewaters (not containing human pathogens) shall be considered for approval by the Board based on a case-specific analysis of human health and environmental concerns.

R317-1-6. Disposal of Domestic Wastewater Treatment Works Sludge.

6.1 General. No person shall use, dispose, or otherwise manage sewage sludge through any practice for which pollutant limits, management practices, and operational standards for pathogens and vector attraction reduction requirements are established in 40 CFR 503, July 1, 1994, except in accordance with such requirements.

6.2 Permit. All treatment works producing, treating and disposing of sewage sludge must comply with applicable permit requirements at R317-3, 6 and 8.

6.3 Septic Tank Contents. The dumping or spreading of septic tank contents is prohibited except in conformance with 40 CFR 503, and as authorized by the local health authority.

6.4 Effective Date. Notwithstanding the effective date for incorporation by reference of 40 CFR 503 provided in R317-8-1.10(9), those portions of 40 CFR 503 specified in R317-1-6.1 and 6.3

are effective immediately.

R317-1-7. Municipal Wastewater Facility Planning and Compliance Criteria.

7.1 Planning and Compliance Requirements.

A. Each wastewater treatment entity in Utah (which does not have an approved, current facility plan) is required to develop, as soon as practicable, but no later than December 31, 1985, a Facilities Management and Financial Plan (FMFP) which will assure that sewerage works construction, operation, maintenance, and replacement needs will be met in a timely manner. A general outline of an FMFP is provided as an attachment. These plans are prerequisite to issuance of construction permits for new or significantly modified wastewater treatment facilities and for certification of new or renewed NPDES permits.

B. The FMFP must include an evaluation of alternatives in sufficient detail to determine the most cost effective and environmentally sound treatment strategy. The strategy must include a timely progression of interim measures which are planned to result in effective wastewater treatment for existing and projected population levels. The FMFP should contain an implementation schedule which outlines the specific measures to be taken which are developed to achieve effective wastewater management as soon as possible. Measurable, continuing progress toward this goal must be achievable. Public entities are encouraged to begin implementing their FMFP as soon as possible.

C. The FMFP must describe a financial plan to pay for all project costs, including replacement costs. This financial plan should include an "enterprise" fund which is separate from the general fund. The enterprise fund will account for user charges and other assessments collected to pay for all necessary operation and maintenance costs, debt service, and capital replacement. The plan should consider budgeting an allowance for eventual replacement of the entire facility at the end of the design life as well as replacement of major components in the interim.

D. The FMFP must address optimizing the operation and maintenance of existing facilities.

E. The FMFP must be consistent with all applicable State and Federal Laws and Regulations regarding pollution control and financial management of publicly owned wastewater treatment facilities. Specific regulatory compliance dates may only be extended on the basis of approval of such a plan.

7.2 Facility Plans. Existing wastewater treatment facility plans for projects awaiting EPA funding for design and construction should be updated where necessary to include all elements of an approvable FMFP (above) and elements identified by EPA in current guidance for an approvable facility plan. Updated facility plans shall be submitted by December 31, 1985.

7.3 Planning Deadline Provisions. The deadline for submission of FMFP's or updated facility plans shall be December 31, 1985. Extensions to this deadline may be granted on a case-by-case basis by the Board if it is demonstrated that the imposition of the deadline will cause financial hardship to the entity; if the plan cannot, despite good faith efforts, be completed by this date; or if the preparation and approval process would likely cause delays in projects already planned and in the process of implementation. A schedule and plan for the preparation of the FMFP or facility plan must be submitted with any extension request.

7.4 Scope of Planning Necessary. In order to assure that FMFP's and facility plans are properly scoped wastewater treatment entities should first determine the current design life of existing wastewater treatment facilities.

If the current design life is five years or less, according to responsible engineering judgement, entities should prepare FMFP's or facility plans with sufficient detail to permit preparation of detailed

design so that construction of necessary wastewater facilities may be completed as soon as possible. Short-term and long-term facilities needs should be addressed. A general outline of such a plan is presented as an attachment. Facility plans, prepared in anticipation of an EPA Construction Grant, must be prepared in accordance with current EPA guidance.

If the current design life exceeds five years, long-term wastewater facilities needs and a financial plan to address these needs, prepared in a professional manner, may be an acceptable level of planning. These facilities needs would generally be established at a very preliminary level in recognition of the fact that detailed plans have a useful life of approximately five years. However, the long-term facilities needs must be estimated so that financial plans can be implemented as necessary.

After a preliminary determination is made regarding the present design life of facilities, the staff of the Bureau of Water Pollution Control should be consulted to provide scoping recommendations. Design criteria, wastewater characteristics, demographics, other factors used to determine the present design life of facilities, and the proposed plan of study should be submitted to the staff before planning is initiated.

7.5 Extensions to the Implementation of Standards.

To permit the expeditious and orderly development of plans for a short and long term wastewater management strategy, the Board will consider temporary extensions to the deadlines for compliance with water quality standards, secondary treatment standards and polished secondary treatment standards where it is documented by the entity that justifiable reasons exist. Extensions may be considered for specific standards and time periods if the following conditions are met:

A. A Facilities Management and Financial Plan or a current Facility Plan has been prepared in accordance with policies noted above.

B. Existing and anticipated conditions will not pose a health hazard.

C. The beneficial uses of affected state waters, as defined by R317-2, will not be seriously impaired by the discharge during the proposed extension.

D. Optimal operation and maintenance of existing facilities will be continued during the extension. Any time extension granted will require a treatment entity to conduct a detailed evaluation of the facility to identify and correct any operational and non-capital intensive deficiencies at the facility.

E. The FMFP or current facility plan must demonstrate that the entity will upgrade its wastewater treatment facility to meet the required standards in a timely manner. User charges and fees must be structured appropriately so that wastewater management facilities become self supporting.

7.6 Responsibility for Planning. Any wastewater treatment entity that is presently in compliance, yet has an identifiable need to plan for future expansion to accommodate growth but elects to wait for federal funds for construction, will make such election with full knowledge that should the capacity of the existing facilities be reached before new facilities are completed, a moratorium on new connections may be imposed and/or other enforcement actions may be taken. In such enforcement actions, the entity will not qualify for any special consideration, since the condition will be considered to have resulted as a matter of its choice.

7.7 Public Participation. The WPCC encourages entities to involve the affected public throughout the development of the Facility Plan or Facilities Management and Financial Plan. Since sewer users will be required to pay for debt retirement, operation and maintenance costs, connection fees, and contractor charges for service lateral hook-up, active citizen involvement is essential to

assess public acceptance prior to bond elections and assure a responsive posture for local governments. The WPCC staff, as resources allow, will assist entities to develop and maintain effective public participation programs.

At least one public meeting should be held during early phases of the planning process before a recommended alternative is developed.

A public hearing should be held prior to the adoption of the Facility Plan or FMFP.

Adequate notification of public meetings, hearings, and actions in response to public participation should be provided.

A consensus of the communities' willingness to proceed with the plan should be developed through public meetings, hearings, referendums, bond elections, etc. and it should be documented in the Facility Plan or FMFP.

7.8 Staff Support. Upon request and as resources permit, the WPCC staff will provide technical assistance to help entities develop interim and long-range programs, construction schedules, FMFP's and Facility Plans. The staff will also provide information relative to securing financing for construction. Technical assistance would include reviews of documents submitted and meetings with city officials and their engineers to help scope the planning project, evaluate work plans, etc., in an effort to facilitate an expeditious approval process.

R317-1-8. Administrative Procedures.

8.1 Designation of Formal or Informal Proceedings. The following proceedings and actions are designated to be conducted either formally or informally as required by Utah Code Annotated Section 63-46b-4:

a. Issuance of construction permits shall be by informal procedures identified in R317-1, R317-2, R317-3 and R317-5.

b. Issuance of discharge permits shall be by informal procedures identified in R317-8.

c. Issuance of underground injection control permits shall be by informal procedures identified in R317-7.

d. Review of facility management and financial plans shall be by informal procedures identified in R317-7.

e. Notices of Violation and Orders are exempt under Utah Code Annotated Section 63-46b-1(2)(k). Appeals to the Committee of Notices of Violation and Orders shall be processed using formal procedures.

f. Appeals of issuances, denials, or conditions of construction permits, discharge permits and underground injection control permits shall be conducted formally.

g. Funding requests, insofar as they are covered by Utah Code Annotated Section 63-46b-1, shall be processed informally using procedures outlined in the Board's regulations, policies and guidelines.

h. Variance requests, exceptions, and other approvals etc. will be processed informally in accordance with the applicable provisions of the Wastewater Disposal Regulations.

8.2 Conversion of Hearings. At any time before a final order is issued, the Board or appointed hearing officer may convert proceedings which are designated to be informal to formal, and proceedings which are designated as formal to informal if conversion is in the public interest and rights of all parties are not unfairly prejudiced.

8.3 Rules for Conducting Formal and Informal Proceedings. Rules for conducting formal proceedings shall be as provided in Utah Code Annotated Sections 63-46b-3, and 63-46b-6 through

63-46b-13. In addition to the procedures referenced in paragraph 8.1 above, the procedures in Utah Code Annotated Sections 63-46b-3 and 63-46b-5 apply to informal proceedings.

8.4 Declaratory Orders. In accordance with the provisions of Utah Code Annotated Section 63-46b-21, any person may file a request for a declaratory order. The request shall be titled a petition for declaratory order and shall specifically identify the issues requested to be the subject of the order. Requests for declaratory order, if set for adjudicative hearing, will be processed informally using the procedures identified in Utah Code Annotated Sections 63-46b-3 and 63-46b-5 unless converted to a formal proceeding under paragraph 8.2 above. No declaratory orders will be issued in the circumstances described in Utah Code Annotated Section 63-46b-21(3)(a). Intervention rights and other procedures governing declaratory orders are outlined in Utah Code Annotated Section 63-46b-21.

R317-1-9. Penalty Criteria for Civil Settlement Negotiations.

9.1 Introduction. Section 19-5-115 of the Water Quality Act provides for penalties of up to $10,000 per day for violations of the act or any permit, rule, or order adopted under it and up to $25,000 per day for willful violations. Because the law does not provide for assessment of administrative penalties, the Attorney General initiates legal proceedings to recover penalties where appropriate.

9.2 Purpose And Applicability. These criteria outline the principles used by the State in civil settlement negotiations with water pollution sources for violations of the UWPCA and/or any permit, rule or order adopted under it. It is designed to be used as a logical basis to determine a reasonable and appropriate penalty for all types of violations to promote a more swift resolution of environmental problems and enforcement actions.

To guide settlement negotiations on the penalty issue, the following principles apply: (1) penalties should be based on the nature and extent of the violation; (2) penalties should at a minimum, recover the economic benefit of noncompliance; (3) penalties should be large enough to deter noncompliance; and (4) penalties should be consistent in an effort to provide fair and equitable treatment of the regulated community.

In determining whether a civil penalty should be sought, the State will consider the magnitude of the violations; the degree of actual environmental harm or the potential for such harm created by the violation(s); response and/or investigative costs incurred by the State or others; any economic advantage the violator may have gained through noncompliance; recidivism of the violator; good faith efforts of the violator; ability of the violator to pay; and the possible deterrent effect of a penalty to prevent future violations.

9.3 Penalty Calculation Methodology. The statutory maximum penalty should first be calculated, for comparison purposes, to determine the potential maximum penalty liability of the violator. The penalty which the State seeks in settlement may not exceed this statutory maximum amount.

The civil penalty figure for settlement purposes should then be calculated based on the following formula: CIVIL PENALTY = PENALTY + ADJUSTMENTS - ECONOMIC AND LEGAL CONSIDERATIONS

PENALTY: Violations are grouped into four main penalty categories based upon the nature and severity of the violation. A penalty range is associated with each category. The following factors will be taken into account to determine where the penalty amount will fall within each range:

A. History of compliance or noncompliance. History of noncompliance includes

consideration of previous violations and degree of recidivism.

B. Degree of willfulness and/or negligence. Factors to be considered include how much control the violator had over and the foreseeability of the events constituting the violation, whether the violator made or could have made reasonable efforts to prevent the violation, whether the violator knew of the legal requirements which were violated, and degree of recalcitrance.

C. Good faith efforts to comply. Good faith takes into account the openness in dealing with the violations, promptness in correction of problems, and the degree of cooperation with the State.

Category A - $7,000 to $10,000 per day. Violations with high impact on public health and the environment to include:

1. Discharges which result in documented public health effects and/or significant environmental damage.

2. Any type of violation not mentioned above severe enough to warrant a penalty assessment under category A.

Category B - $2,000 to $7,000 per day. Major violations of the Utah Water Pollution Control Act, associated regulations, permits or orders to include:

1. Discharges which likely caused or potentially would cause (undocumented) public health effects or significant environmental damage.

2. Creation of a serious hazard to public health or the environment.

3. Illegal discharges containing significant quantities or concentrations of toxic or hazardous materials.

4. Any type of violation not mentioned previously which warrants a penalty assessment under Category B.

Category C - $500 to $2,000 per day. Violations of the Utah Water Pollution Control Act, associated regulations, permits or orders to include:

1. Significant excursion of permit effluent limits.

2. Substantial non-compliance with the requirements of a compliance schedule.

3. Substantial non-compliance with monitoring and reporting requirements.

4. Illegal discharge containing significant quantities or concentrations of non toxic or non hazardous materials.

5. Any type of violation not mentioned previously which warrants a penalty assessment under Category C.

Category D - up to $500 per day. Minor violations of the Utah Water Pollution Control Act, associated regulations, permits or orders to include:

1. Minor excursion of permit effluent limits.

2. Minor violations of compliance schedule requirements.

3. Minor violations of reporting requirements.

4. Illegal discharges not covered in Categories A, B and C.

5. Any type of violations not mentioned previously which warrants a penalty assessment under category D.

ADJUSTMENTS: The civil penalty shall be calculated by adding the following adjustments to the penalty amount determined above: 1) economic benefit gained as a result of non-compliance; 2) investigative costs incurred by the State and/or other governmental levels; 3) documented monetary costs associated with environmental damage.

ECONOMIC AND LEGAL CONSIDERATIONS: An adjustment downward may be made or a delayed payment schedule may be used based on a documented inability of the violator to pay.

Also, an adjustment downward may be made in consideration of the potential for protracted litigation, an attempt to ascertain the maximum penalty the court is likely to award, and/or the strength of the case.

9.4 Mitigation Projects. In some exceptional cases, it may be appropriate to allow the reduction of the penalty assessment in recognition of the violator's good faith undertaking of an environmentally beneficial mitigation project. The following criteria should be used in determining the eligibility of such projects:

A. The project must be in addition to all regulatory compliance obligations;

B. The project preferably should closely address the environmental effects of the violation;

C. The actual cost to the violator, after consideration of tax benefits, must reflect a deterrent effect;

D. The project must primarily benefit the environment rather than benefit the violator;

E. The project must be judicially enforceable;

F. The project must not generate positive public perception for violations of the law.

9.5 Intent Of Criteria/Information Requests. The criteria and procedures in this section are intended solely for the guidance of the State. They are not intended, and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the State.

KEY: water pollution, waste disposal, industrial waste, effluent standards*
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